lappen). Its surface was covered with round, slightly elevated, hard nodules, grayish red at the borders, with glistening-white retracted centres. The impulse to remove this lobe and so get rid of the growth was checked by finding similar masses over the rest of the liver. The patient recovered her health completely after inunction treatment.

The third patient who had previously been quite healthy, complained of having had pain in the region of the gall-bladder for four weeks with loss of appetite and slight emaciation. A mass was felt in the region of the gall-bladder leading to a probable diagnosis of gall-bladder disease. At operation a smooth rounded mass about the size of an egg was found at the free border of the liver connected with the right lobe. As the diagnosis still remained uncertain the mass was removed and on microscopic examination proved to be a gumma.

In the absence of a definite history of syphilis the diagnosis in such cases becomes very difficult. There are two forms of syphilis of the liver in which tumors may occur: a diffuse interstitial hepatitis in which irregular bands of connective tissue by contracting may leave prominent masses of liver substance often connected with the main lobe by narrow bands (Gestieltenlappen) and gummata. These two processes are frequently combined. The Gestieltenlappen may, as in the second case, be fairly independent and freely movable and often give one the impression of being kidney or gall-bladder tumors. Gummata are as a rule distinguishable as tumors within the substance of the liver itself. Considering the difficulty of diagnosis many of these tumors must come to operation—when carcinoma, tuberculosis, and sarcoma must be considered. If after the diagnosis of syphilis has been definitely made should the operator proceed to remove the diseased portion or sew up the wound and put the patient on antisyphilitic treatment? This question remains open. König thinks each case must be decided on its own merits. If the tumor can be easily removed, as in his third case, he believes it is often best to excise it.

Diabetes Insipidus and other Polyurias.—Although diabetes insipidus has been given a place as a distinct disease its definition remains obscure and unsatisfactory. It rests practically upon a single symptom whose etiology and pathology are not understood. It has been much discussed whether polydipsia or polyuria is the primary condition. It seems almost certain that some cases of hysterical origin do depend upon a primary polydipsia and it has been difficult to distinguish these from cases of polyuria. Whether the patient with diabetes insipidus retains water longer than the normal individual or passes it more quickly is still a discussed point. Buttersack considers tachyuria a sign of primary polydipsia. Observations purporting to show a continuous increase in the amount of urea and solids excreted would, if sustained, place the disease among the disorders of metabolism. The mass of available evidence, however, speaks against there being any change in metabolic function. The question of greatest interest, do the kidneys in diabetes insipidus functionate the same as normal kidneys, has not been satisfactorily answered.

Much light is shed upon all of these points by the investigations of MEYERS (*Deutsch. Arch. f. klin. Med.*, 1905, lxxxiii., 1). He reports five cases of diabetes insipidus in which he makes the interesting observation that in these patients the concentration of the urine remains practically uniform, and in order to regulate for changes in the output of solids the amount of fluid or the dilution is varied. The quantity of urine depends directly upon the amount of nitrogenous food and sodium chloride taken in. These features are strikingly illustrated in the first of Meyers' patients.

This patient, a typical case of diabetes insipidus, was passing on admission, from 12,000 to 13,000 c.c. of urine and drinking about 12 litres of water a day. Under a rigid diet devised by Tallqvist, from which nitrogenous food is almost entirely excluded, the amount of urine fell at once to 7600 c.c. and on the second day to 5900 c.c. Small amounts of milk and meat added brought the amount at once up to 8100 c.c., and upon such a restricted diet it varied from 7 to 10 litres but never went as high as on admission. After having determined by a number of other experiments this remarkable relation between the amount of urine and the character of the food the patient was again placed upon a rigid diet and on the first of September, 20 grams of sodium chloride were administered. The amount of urine increased at once to 11,250 c.c. and fell again the following day to 6600 c.c. The influence of the administration of 150 grams of meat is apparent in a second rise on September 10th. The special feature of the case, however, is that the concentration of the urine as determined by the freezing point is practically uniform. This concentration is very low--the urine is markedly hypisotonic and dissolves the patient's red blood corpuscles—but for the twenty-four hours the molecules and ions excreted equal the normal amount.

The second patient reacted in a similar manner to nitrogenous food and sodium chloride. Experiments on the phosphate metabolism showed that the increase in the amount of phosphate excreted did not increase the amount of urine. Twenty grams of sodium phosphate were administered, and although there was a marked increase in the amount of phosphate excreted the amount of urine and the molecular concentration remained practically constant, there being a sodium chloride retention to accommodate the increasing output of phosphates.

The third patient had diabetes insipidus complicating severe cerebral lues. Following the freezing point carefully, one finds that there was not complete loss of the ability to react with increased concentration, as values varying from 0.23 to 0.31 are found. This is brought out particularly well by collecting separately the urine from different parts of the twenty-four hours, when there is shown a fairly wide daily variation in concentration.

Case V is one of a mild grade of polyuria coming on during observation as a complication of another disease. Its advent was associated with a marked fall in pulse rate and blood pressure. It disappeared during an attack of facial erysipelas to reappear during convalescence. The power of the kidneys to yield a concentrated urine was less affected than in any of the other cases. After the administraton of salt the increased amount of urine was the principal reaction, but the freezing point was appreciably reduced and the percentage of sodium chloride increased.

In these cases sodium chloride and nitrogen or urea act as diuretics. To determine the action of drugs which ordinarily cause a diuresis by acting upon the parenchyma, theocin was administered. In Cases I, II, and III there was no increase in the quantity of urine but a distinct lowering of the freezing point and a very marked increase in the sodium chloride excretion balanced partly by increased concentration, partly by nitrogen and phosphate retention. The day following there was a marked chloride retention and the amount of urine is proportionately decreased. In Case V, however, theocin is followed by an increase in the amount of urine, and while a larger quantity of sodium chloride is excreted, the total amount and the sodium chloride concentration remain practically unchanged. Theocin must cause changes in the kidneys having the same effect as the altered circulatory conditions under the influence of fever (Case V), namely, the excretion of a more concentrated urine.

The normal individual, as Meyers shows, by striking curves, reacts to an increased salt and nitrogen elimination with increased concentration and only secondarily with increased quantity. In diabetes insipidus patients the mechanism for producing a concentrated urine is damaged. This is the primary condition and the large quantity of urine passed is only a necessary consequence by which the solids are excreted.

As has been shown the degree to which this mechanism is damaged is very variable in different patients. Determining the reaction of the urine to diet and salt gives a ready means of distinguishing between cases of true diabetes insipidus and polyurias depending upon polydipsia. Meyers gives the records of a number of such cases, depending probably upon hysterical conditions, and shows that their urine reacts as in a normal individual with change of concentration as well as with change of amount. In cases of chronic interstitial nephritis with polyuria the same conditions hold good. The tables show a marked variation in amount and concentration without definite relation to the diet. It is true that the two conditions, namely, chronic nephritis and diabetes insipidus, do approach one another, and that the ability to secrete a concentrated urine is affected in both, but only in a slight degree in nephritis as compared with diabetes insipidus.

It seems definite clinically that these cases depend upon some nervous influence, and in all probability bear a close relation to a centre in the floor of the fourth ventricle, discovered by Claude Bernard and Ekhardt. In the second portion of his lengthy paper Meyers discusses views relating to the excretion of the various urinary constituents. The matter does not lend itself to brief abstraction.

SURGERY.

UNDER THE CHARGE OF

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An Inguinal Testicle and a Tumor of an Abdominal Testicle in a Woman.—Marion (*Annales des Maladies des Organes Genito-urinaires*, December 1, 1905) records a most interesting case. The woman,